

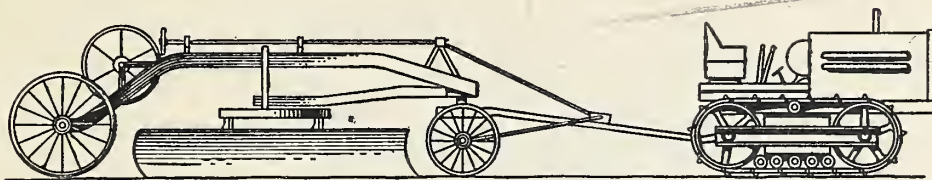
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CONSTRUCTION



HINTS

UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE
WASHINGTON, D. C.

Vol. 3.

September 11, 1937.

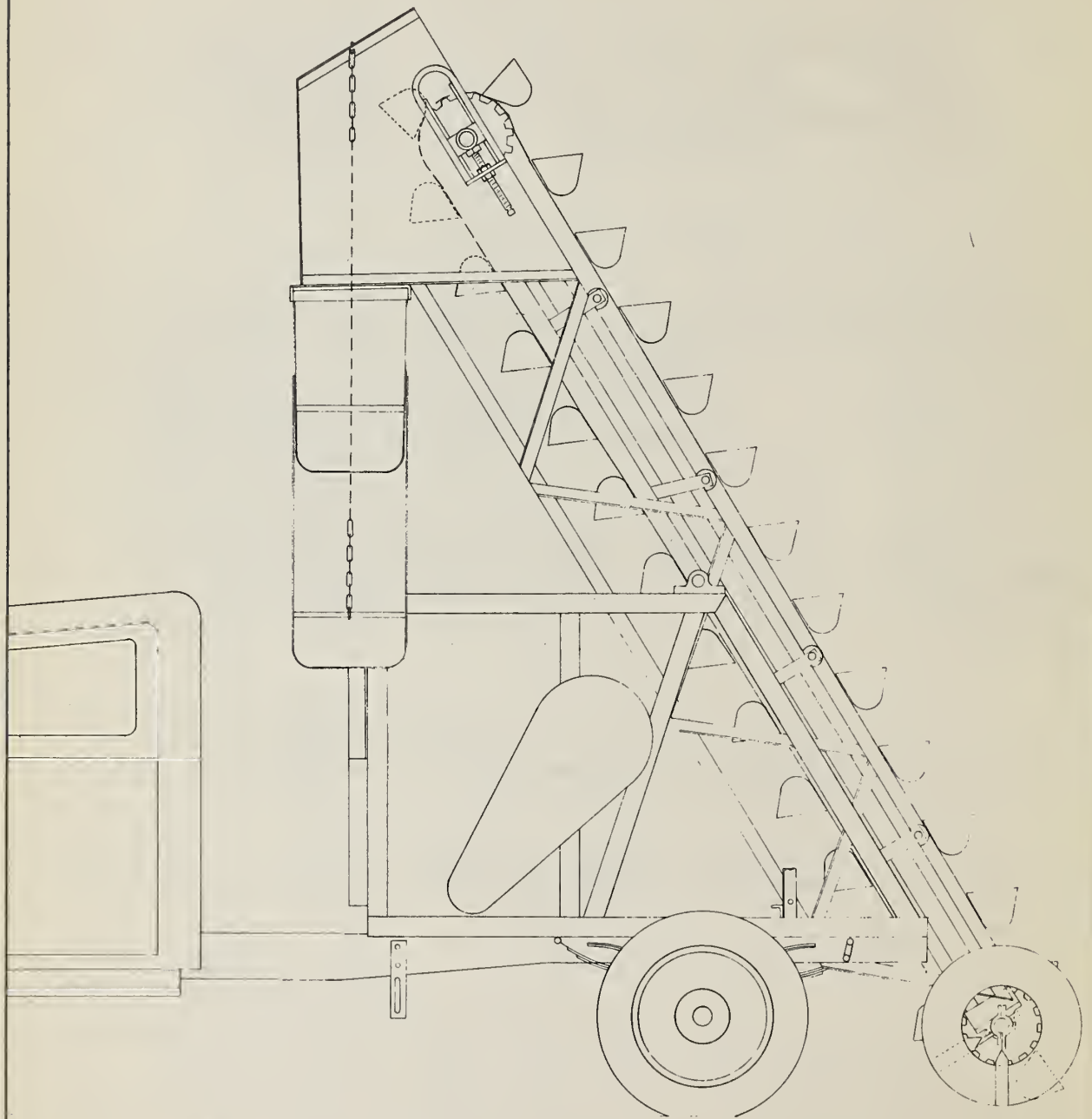
No. 13.

Everything is subject to change - including editors. Harold L. Friend who has done so nobly in the past, has had to relinquish this interesting assignment for more pressing matters. We will try to keep up the good work, but must of necessity depend upon your ideas and suggestions, for our success.

In order that credit may be properly and completely given, please list name, position, region, state, and camp in all material submitted. If possible, such information should be placed on drawings, so that it can be reproduced directly.

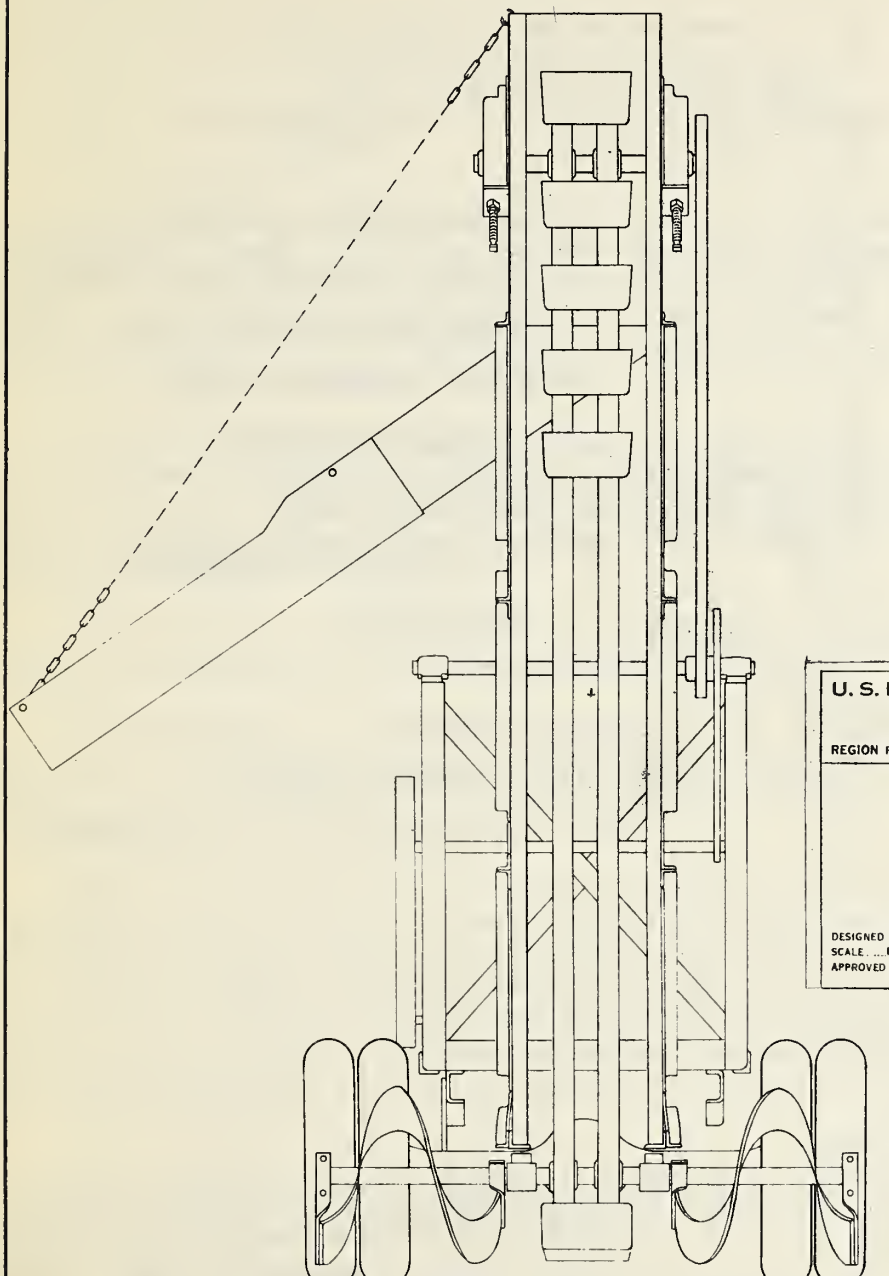
We would appreciate having any omissions brought to our attention, and will be more than pleased to make corrections in the following issue.

Donald Hamilton.



SIDE VIEW

PART OF SHEET 2 OF 4 SHEETS
DRAWING C-102



END VIEW

U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

REGION FOUR

J. P. MARTIN, REGIONAL ENGINEER

PORTABLE
GRAVEL LOADER
(OPERATING POSITION)

DESIGNED E. C. E. DRAWN R. S. G. TRACED A. W. J.
SCALE 1 INCH = 1 FOOT CHECKED J. F. B.
APPROVED *J. P. Martin* DATE 4-20-37

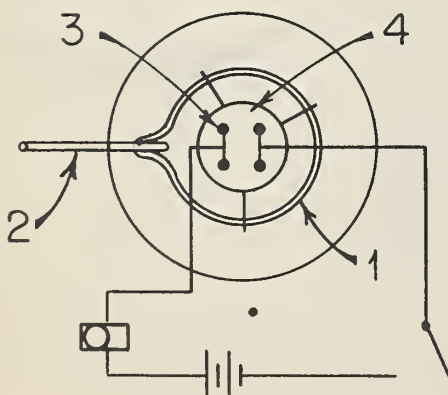
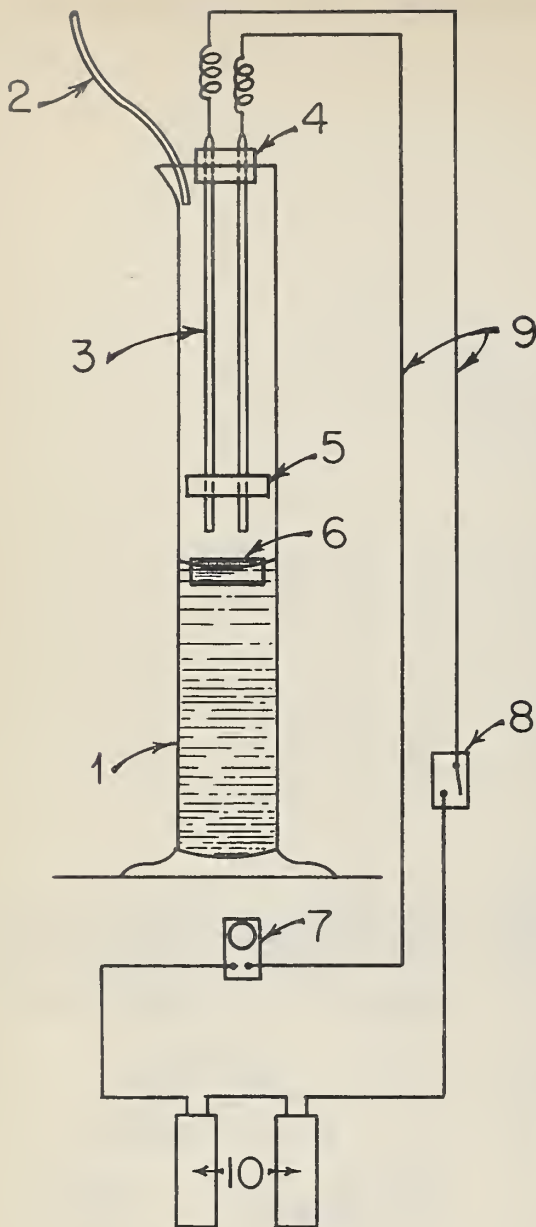
*Note:
Complete detail drawings
can be obtained from R-4*

PART OF SHEET 2 OF 4 SHEETS
DRAWING C-102

RAIN ALARM

—KEY—

- 1— Graduated cylinder
- 2— $\frac{1}{4}$ inch copper or rubber tube from roof gage
- 3— Four contact rods
- 4— Supporting cork
- 5— Spacing cork
- 6— Float (cork wrapped in lead foil)
- 7— Bell
- 8— Switch
- 9— Flexible wires
- 10— Telephone dry batteries



Wiring Diagram

U.S. DEPT. AGRICULTURE FOREST SERVICE
CALIF. FOREST & RANGE EXPER. STATION
E.I. KOTOK, DIRECTOR

Project: Forest Influences

Designed By C.H. Gleason

Date 1-12-35

Drawn By J. Stokes

Date 1-26-35

Approved By J.D. Sinclair

Date 1-30-35

Approved By C.J. Kraibel

Date 2-1-37

Scale

Drawing No.

RAIN ALARM

Submitted by Clark H. Gleason
Assistant Forester
Forest Influences Project
California Forest and Range Experiment Station

A dependable automatic rain alarm that will give notice when a predetermined amount of rain has fallen, has been developed by erosion streamflow researchers of the California Forest and Range Experiment Station. In process of evolution the past three winters, its present form has allowed its users many nights of sleep that would otherwise have been spent in fruitless watching.

Briefly, the device consists of an electric doorbell connected with telephone dry batteries, whose circuit is closed by a float rising with the rainfall collected in a suitable container. The alarm is constructed of stock parts or easily procurable materials which can be quickly assembled at low cost.

The container is an ordinary 1000-ml graduated glass cylinder used by the California Station for reading rain gages.

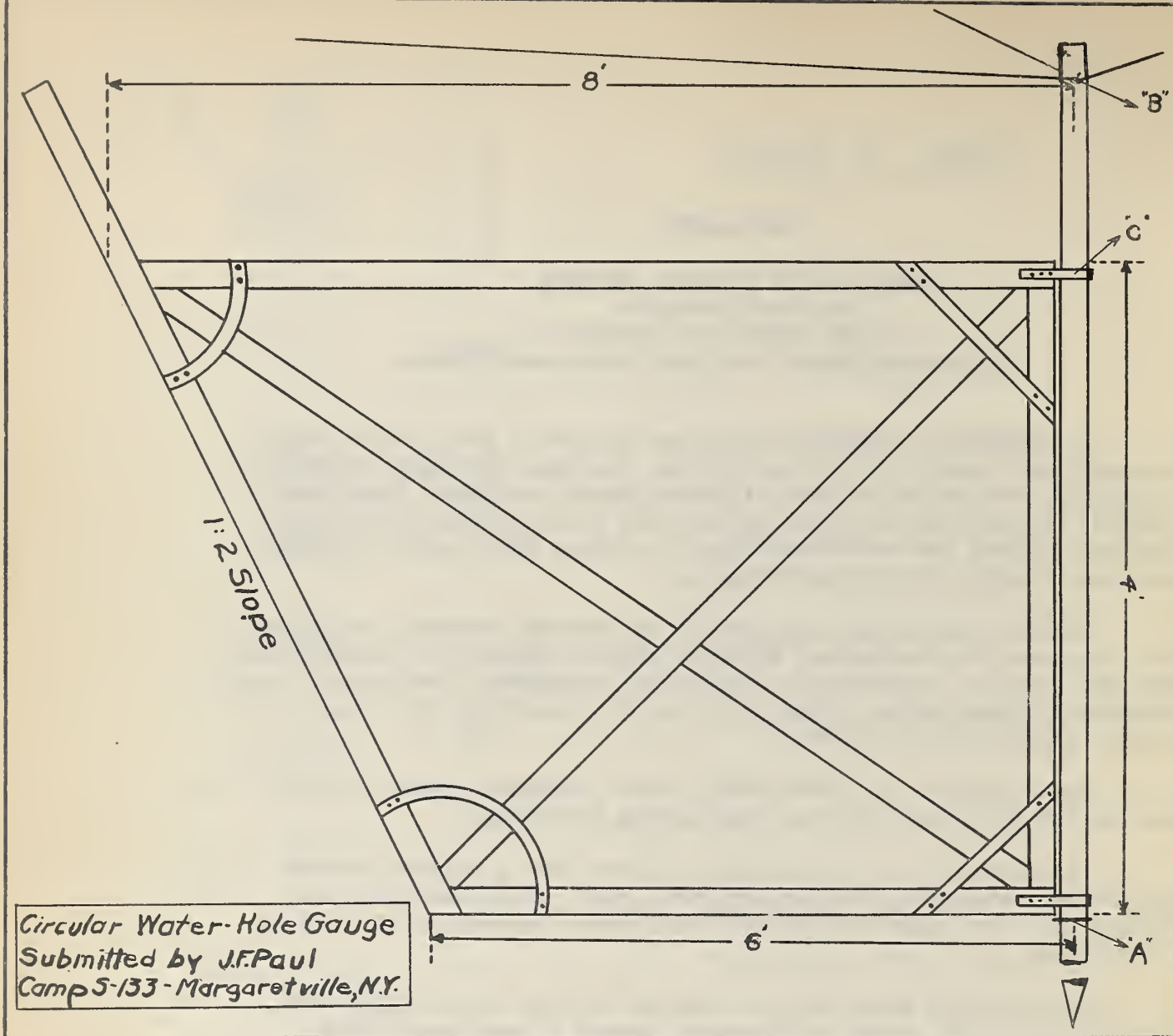
Precipitation is led to this cylinder from a standard 8-inch gage funnel mounted on the shelter cabin roof. With the alarm unit removed this roof gage can be used for direct observation of rainfall intensities.

Four contact rods, made of brazing or other non-rusting wire approximately $\frac{3}{32}$ inches in diameter, pierce a large supporting cork which is hung by three nails from the graduate lip. A second cork maintains proper spacing between the lower ends of the rods. The alarm may be set for any desired amount of rain, up to approximately 1 inch, by sliding the rods up or down through the supporting cork. Four rods wired in parallel are used to assure positive contact with the float.

The float is a thin segment of cork wrapped with lead foil from a cigarette package; the wrappings of Herbert Tareytons and Chesterfields are suitable.

A small knife switch in the bell circuit facilitates disconnecting when the sleeper is aroused, but it is recommended that the switch be mounted at some distance from his bed!

No claim is made for beauty of the instrument, but its dependability has been many times proven.



CIRCULAR WATER HOLE GAUGE

An easily constructed device to aid in laying up a circular battered wall. Gauge as shown is for a hole with a bottom diameter of 12', top diameter of 16' and a depth of 4'.

The framing material is 2" - 2" spruce, braced at the corners with 1/8" - 1" iron. The frame itself hangs on a 2" pipe pointed at one end so that it can be driven securely in the ground to a depth of about two feet. A washer at point "A" keeps frame from sliding down the iron pipe. Guy wires at "B" steady the pipe and keep it plumb. The frame swings free on the pipe, being fastened at points marked "C".

The hole is usually dug with a bottom diameter of 16' and a top diameter of 20' which allows for a wall two feet thick.